

CLAIMS

What is claimed is:

- 5 1. A solid phase extraction cartridge comprising a water-wettable polymer packed inside an open-ended container, said polymer being formed by copolymerizing at least one hydrophobic monomer and at least one hydrophilic monomer having a hydrophobic to hydrophilic monomer ratio sufficient for the polymer to be water-wettable while being effective to retain organic solutes thereon and wherein said
10 polymer is capable of adsorbing a less polar solute more strongly than a more polar solute and wherein said solutes are capable of being desorbed from said polymer in order of decreasing polarity by washing said polymer with a sequence of solvents of decreasing polarity.
2. The solid phase extraction cartridge of Claim 1 wherein the polymer is a
15 poly(divinylbenzene-co-N-vinylpyrrolidone) copolymer.
3. The solid phase extraction cartridge of Claim 1 comprising from 0.001 g to 10 g of copolymer.
4. The solid phase extraction cartridge of Claim 3 comprising from 0.025 g to 1 g of copolymer.
- 20 5. The solid phase extraction cartridge of Claim 1 further comprising one or more porous retaining means adjacent to the polymer.
6. The solid phase extraction cartridge of Claim 5 wherein at least one porous retaining means is a filter element.

7. The solid phase extraction cartridge of Claim 1 wherein the hydrophilic monomer comprises a heterocyclic group.
8. The solid phase extraction cartridge of Claim 7 wherein the heterocyclic group is a pyrrolidonyl group or a pyridyl group.
- 5 9. The solid phase extraction cartridge of Claim 8 wherein the hydrophilic monomer is selected from the group consisting of 2-vinylpyridine, 3-vinylpyridine and 4-vinylpyridine.
10. The solid phase extraction cartridge of Claim 8 wherein the hydrophilic monomer is N-vinylpyrrolidone.
- 10 11. The solid phase extraction cartridge of Claim 1 wherein the hydrophobic monomer comprises a phenyl group, a phenylene group or a straight chain or branched C₂-C₁₈ alkyl group.
12. The solid phase extraction cartridge of Claim 11 wherein the hydrophobic monomer is styrene or divinylbenzene.